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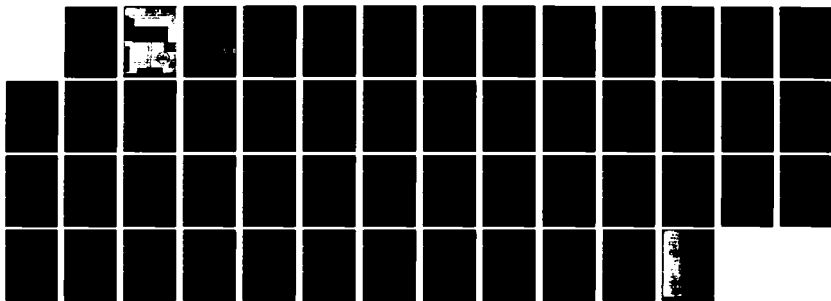
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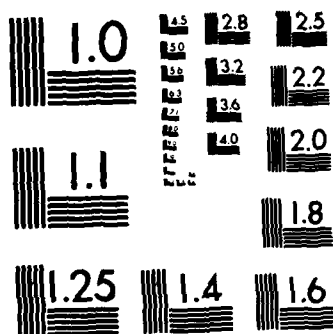
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PROFILE OF PRIOR-SERVICE ACCESSIONS TO THE U.S. NAVY:
FISCAL YEARS 1973-1981^a

Technical Report ONR 83-1, April 1983

Stanley P. Stephenson, Jr., Leland L. Boik,
and David R. Ellison

with the assistance of
Stanley D. Fitch

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Institute for Policy Research and Evaluation
The Pennsylvania State University
University Park, PA 16802

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) DMDC data have been analyzed for all prior-service enlisted men who reentered the U.S. Navy during fiscal years 1973-1981. The analysis indicates that the number of prior-service enlistments increased during this time, especially after fiscal year 1977. Various characteristics of these reentrants are reported by fiscal year, including recruiting area, pay grade, AFQT group, education, race, number of dependents, marital status, and prior-service branch.		

TABLE OF CONTENTS

LIST OF FIGURES	ii
LIST OF TABLES	iii
EXECUTIVE SUMMARY	1
INTRODUCTION	3
NUMBER OF ACCESSIONS BY YEAR OF REENTRY	4
MILITARY BACKGROUND OF PRIOR-SERVICE PERSONNEL	7
Navy Recruiting Areas by Year of Reentry	7
Reentry Pay Grades by Year of Reentry	10
Other Services by Year of Reentry	10
AFQT Groups by Year of Reentry	15
SOCIODEMOGRAPHIC DATA CONCERNING PRIOR-SERVICE PERSONNEL	18
Education by Year of Reentry	18
Marital Status by Year of Reentry	18
Number of Dependents by Year of Reentry	23
Ethnic Group by Year of Reentry	23
Age by Year of Reentry	23
Occupational Category by Year of Reentry	30
CONCLUSION AND FUTURE RESEARCH IMPLICATIONS	34

LIST OF FIGURES

		<u>Page</u>
FIGURE 1	Prior-Service Accessions: Number of Accessions by Year of Entry	5
FIGURE 2	Prior-Service Accessions: Navy Recruiting Areas by Year of Entry	8
FIGURE 3	Prior-Service Accessions: Pay Grades by Year of Entry	10
FIGURE 4	Prior-Service Accessions: Other Services by Year of Entry	13
FIGURE 5	Prior-Service Accessions: AFQT Groups by Year of Entry	16
FIGURE 6	Prior-Service Accessions: Levels of Education by Year of Entry	19
FIGURE 7	Prior-Service Accessions: Marital Status by Year of Entry	21
FIGURE 8	Prior-Service Accessions: Number of Dependents by Year of Entry	24
FIGURE 9	Prior-Service Accessions: Ethnic Groups by Year of Entry	26
FIGURE 10	Prior-Service Accessions: Ages by Year of Entry	28

LIST OF TABLES

		<u>Page</u>
TABLE 1	Number of Prior-Service Accessions by Year of Reentry	6
TABLE 2	Number of Prior-Service Accessions by Navy Recruiting Area and Year of Reentry	9
TABLE 3	Number of Prior-Service Accessssions by Reentry Pay Grade and Year of Reentry	12
TABLE 4	Number of Prior-Service Accessions by Area of Prior Service and Year of Reentry	14
TABLE 5	Number of Prior-Service Accessions by AFQT Group and Year of Reentry	17
TABLE 6	Number of Prior-Service Accessions by Education and Year of Reentry	20
TABLE 7	Number of Prior-Service Accessions by Marital Status and Year of Reentry	22
TABLE 8	Number of Prior-Service Accessions by Number of Dependents and Year of Reentry	25
TABLE 9	Number of Prior-Service Accessions by Ethnic Group and Year of Reentry	27
TABLE 10	Number of Prior-Service Accessions by Age and Year of Reentry	29
TABLE 11	Number of Prior-Service Accessions by Year and DOD Occupational Category	31

EXECUTIVE SUMMARY

The Pennsylvania State University, Institute for Policy Research and Evaluation, is conducting an empirical study of prior-service personnel for the United States Navy, Office of Naval Research. As background for that study, descriptive analyses of the prior-service community were completed. This report presents descriptive analyses of all prior-service enlisted men who reentered the Navy in fiscal years 1973 to 1981. It is intentionally limited to a descriptive analysis. Therefore, it neither tests specific hypotheses nor produces specific policy recommendations.

The analyses presented in this report describe reentrants by year of reentry, selected military background variables, and sociodemographic characteristics. Specific findings include the following:

- The number of prior-service accessions has increased between 1973 and 1981. The greatest increase occurred after 1979. Average annual accessions were 7,469 persons in the 1973 to 1977 period and 11,129 after 1979.
- The proportion of prior-service reentrants in pay grades above E03 has been increasing, but most reentrants still were in pay grades E03 or below.
- The proportion of single reentrants increased from 31 to 58 percent in the 1973 to 1981 period. Similarly, the proportion of reentrants with no dependents increased from 24 to 54 percent in this period.
- The proportion of black reentrants has increased 50 percent between fiscal years 1973 and 1981, but 4 out of 5 accessions are still white.
- The proportion of 21- to 30-year-old reentrants has decreased, but 3 out of 4 accessions are still in this age bracket.
- Not all accessions are reentering in CREO groups. In fact, the proportion of reentrants in non-occupational categories has been increasing -- a point which is perhaps the most disturbing result discussed in this report.

These findings are discussed in more detail in the accompanying report. Certain implications of these findings also are presented. Related issues and various policy implications are being explored in subsequent reports of The Pennsylvania State University Project.

Stanley P. Stephenson, Jr.
Principal Investigator
April, 1983

INTRODUCTION

The number of prior-service enlisted individuals who enter the Navy is an important factor in maintaining an adequate supply of well-trained military personnel. These individuals are being studied in a project titled, "An Empirical Study to Enhance the Reenlistment Process of Civilian Personnel With Prior Military Service."¹ This report is the first in a series of technical reports which were completed as part of this project.

This report uses data obtained from the Department of Defense Manpower Data Center (DMDC), to describe prior-service personnel who reentered the Navy during fiscal years 1973 to 1981. All 74,181 people who reentered the Navy as enlisted men in the FY73 to FY81 period were included in the analyses.

The analyses presented in this report are descriptive and preliminary. The intention is to provide a basic description of the characteristics and background of prior-service personnel. In particular, prior-service accessions for the FY73 to FY81 period are categorized in the following way:

OVERALL TRENDS IN ACCESSIONS

- By Year of Reentry (Figure 1 and Table 1)

TRENDS IN ACCESSIONS BY MILITARY BACKGROUND FACTORS

- By Navy Recruiting Area and Year of Reentry (Figure 2 and Table 2)
- By Pay Grade and Year of Reentry (Figure 3 and Table 3)
- By Other Service Area and Year of Reentry (Figure 4 and Table 4)

¹Office of Naval Research Contract No. N00014-82-K-0262

TRENDS IN ACCESSIONS BY SOCIODEMOGRAPHIC FACTORS

- By AFQT Group and Year of Reentry (Figure 5 and Table 5)
- By Education and Year of Reentry (Figure 6 and Table 6)
- By Marital Status and Year of Reentry (Figure 7 and Table 7)
- By Number of Dependents and Year of Reentry (Figure 8 and Table 8)
- By Ethnic Group and Year of Reentry (Figure 9 and Table 9)
- By Age and Year of Reentry (Figure 10 and Table 10)
- By Occupational Category and Year of reentry (Table 11)

NUMBER OF ACCESSIONS BY YEAR OF REENTRY

Figure 1 and Table 1 show the total number of prior-service accessions for fiscal years 1973 to 1981. The average annual number of prior-service accessions for the entire period was 8,094. A simple linear-trend analysis shows that the average annual increment was 470 persons. Yet it appears that the period after 1978 was quite different from the 1973 to 1977 period. Separate trend analyses for each period were computed. Parameters were estimated for an equation of the form $y = a + bx$, where y is annual number of enlistments; x is a time count (0 for 1973, 1 for 1974, etc.); a is the intercept; and b is the slope of the estimated line.

For the entire period: $y = 6,214 + 470X$, $\bar{y} = 8,094$, $R^2 = 0.45$.

For the 1973 to 1977 period: $y = 6,740 + 364X$, $\bar{y} = 7,469$,

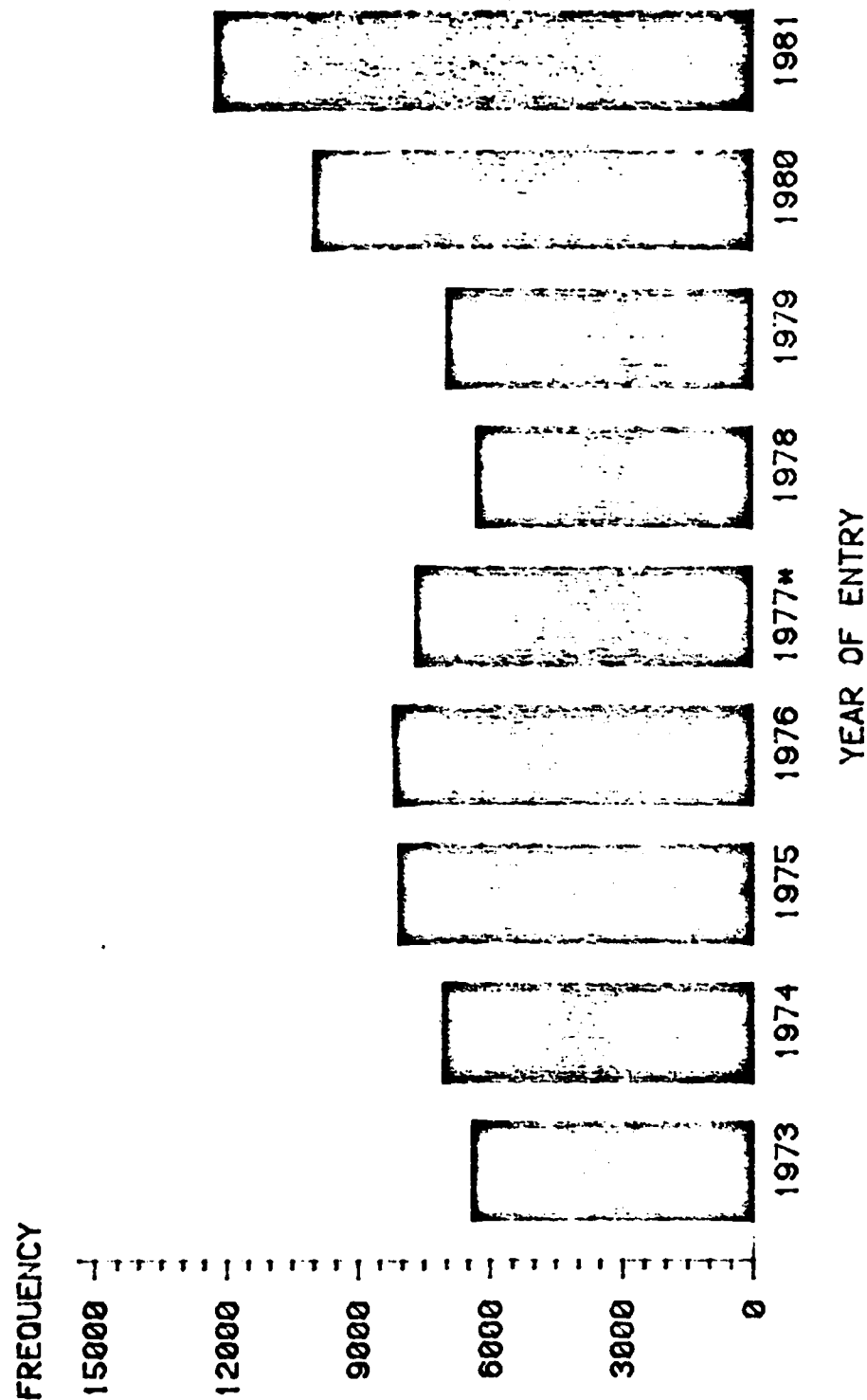
$$R^2 = 0.60.$$

For the 1978 to 1981 period: $y = 5,729 + 2,097X$, $\bar{y} = 8,875$,

$$R^2 = 0.95.$$

PRIOR SERVICE ACCESSIONS

Figure 1. Number of Accessions by Year of Entry



* For comparability FY1977 excluded the transition quarter July to September

TABLE 1
Number of Prior-Service Accessions
By Year of Reentry*

	FY73	FY74	FY75	FY76	FY77a*	FY77b*	FY78	FY79	FY80	FY81	TOTAL
Number	6392	7062	8064	8167	7661	1335	6278	6964	10002	12256	74181
Percent	(8.6)	(9.5)	(10.9)	(11.0)	(10.3)	(1.8)	(8.5)	(9.4)	(13.5)	(16.5)	(100)

*FY77 is split into two periods: FY77a for July 1, 1976 to June 30, 1977 and FY77b for July to September 1977.

The average annual increment for the period after 1978 is 2,097--almost six times the annual increment of 364 for the earlier period. Also, there was a sharp jump (nearly 19 percent) in the overall average number of reentrants (7,469 to 8,875 persons). No doubt other factors, such as economic business cycles and external economic shocks arising from OPEC price changes, may have contributed to the rise in the aggregate number of reentrants for prior-service personnel. However, the fact that 95 percent of the growth in the number of reentrants in the post-1977 period can be explained by a simple trend term suggests the possible effects of structural shifts in the recruiting process in this period.^a The number of prior-service reentrants in recent years has been rising very rapidly relative to earlier years.

MILITARY BACKGROUND OF PRIOR-SERVICE PERSONNEL

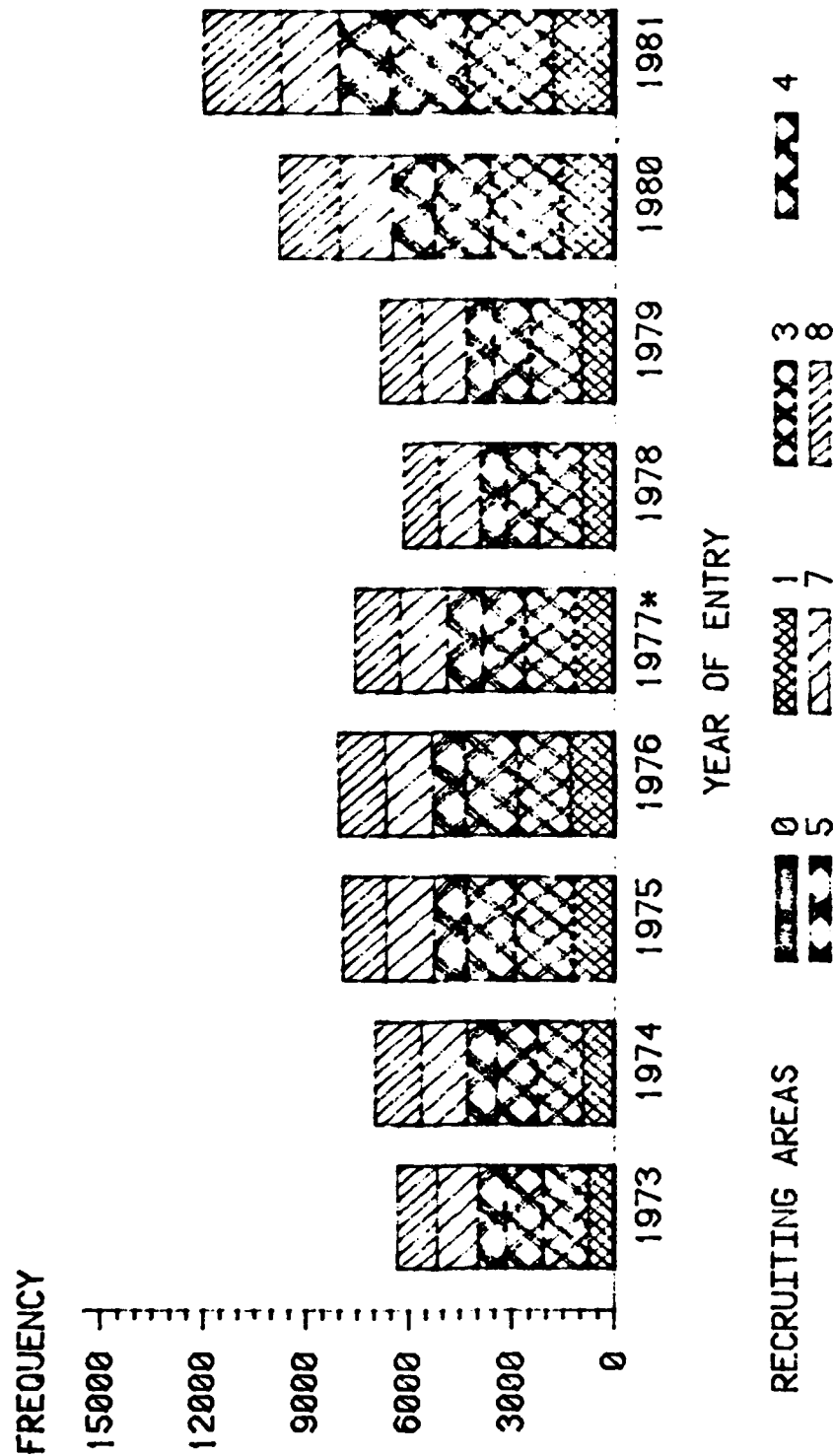
Navy Recruiting Areas by Year of Reentry.

The geographic location of prior-service enlistments is an important consideration for recruiters. Figure 2 and Table 2 describe the number of reentrants by Navy Recruiting Area: 0 refers to outside the continental U.S.; 1 is the Northeast states; 3 is the Southeast states; 4 is the Mid-Atlantic and Near Mid-West states; 5 is the North Central states; 7 is the South Central states; and 8 is the Pacific/Mountain states. Figure 2 and Table 2 show relatively stable geographic proportions across the period FY73 to FY81. This is indicated by little variation in the column percentages across the various years. The sharp

^aSubsequent analysis and discussions with U.S. Navy Recruiting Command staff support this suggestion.

PRIOR SERVICE ACCESSIONS

Figure 2. Navy Recruiting Areas by Year of Entry



* For comparability FY1977 excluded the transition quarter July to September

TABLE 2

Number of Prior-Service Accessions by
Navy Recruiting Area and Year of Reentry*

Recruiting Area	FY73	FY74	FY75	FY76	FY77a*	FY77b	FY78	FY79	FY80	FY81	TOTAL
0 (Outside Continental United States)	33 (0.5)	47 (0.7)	35 (0.4)	48 (0.6)	50 (0.7)	12 (0.9)	38 (0.6)	46 (0.7)	77 (0.8)	111 (0.9)	497 (0.7)
1 (Northeast)	741 (11.7)	872 (12.5)	1172 (14.8)	1264 (15.7)	1081 (14.3)	169 (12.8)	912 (14.9)	925 (13.5)	1481 (15.1)	1711 (14.2)	10328 (14.2)
3 (Southeast)	1309 (20.7)	1320 (18.9)	1700 (21.4)	1525 (19.0)	1488 (19.7)	323 (24.5)	1270 (20.7)	1492 (21.8)	2090 (21.3)	2515 (20.9)	15032 (20.6)
4 (Mid-Atlantic, Near Midwest)	1067 (16.9)	1197 (17.2)	1420 (17.9)	1526 (19.0)	1202 (15.9)	154 (11.7)	928 (15.1)	1067 (15.6)	1622 (16.5)	2215 (18.4)	12398 (17.0)
5 (North Central)	820 (13.0)	864 (12.4)	938 (11.8)	932 (11.6)	1036 (13.7)	185 (14.1)	766 (12.5)	814 (11.9)	1229 (12.5)	1531 (12.7)	9115 (12.5)
7 (South Central)	1180 (18.7)	1344 (19.3)	1402 (17.7)	1386 (17.2)	1381 (18.3)	290 (22.0)	1203 (19.6)	1298 (19.0)	1550 (15.8)	1691 (14.0)	12725 (17.4)
8 (Pacific/Mountain)	1160 (18.4)	1329 (19.1)	1264 (15.9)	1363 (16.9)	1299 (17.2)	183 (13.9)	1020 (16.6)	1190 (17.4)	1761 (18.0)	2268 (18.8)	12837 (17.6)
Total Nonmissing	6310	6973	7931	8044	7537	1316	6137	6832	9810	12042	72932
Missing	82	89	133	123	124	19	141	132	192	214	1249
TOTAL	6392	7062	8064	8167	7661	1335	6278	6964	10002	12256	74181

Notes: () The percentages are column percents of the nonmissing totals.

*FY77 is split into periods: FY77a for July 1, 1976 to June 30, 1977 and FY77b for July to September 1977.

rise in the number of reentrants cannot therefore be explained by a sudden rise in the number of reentrants from one or two locations.

Reentry Pay Grades by Year of Reentry

Pay grade is an important measure for manpower planning. Figure 3 and Table 3 describe pay grades of prior-service personnel at time of reentry. Grades E03 and below accounted for the greatest proportions of reentrants in 1975 (72 percent), 1976 (69 percent), and 1974 (68 percent). The corresponding percentages were generally lower in fiscal years 1978 through 1981 than in earlier years: 57, 57, 56, and 46 percent for fiscal years 1978, 1979, 1980, and 1981, respectively; 59, 68, 72, 69, and 65 percent for fiscal years 1973, 1974, 1975, 1976, and 1977. While the proportion of prior-service reentrants in pay grades above E03 has been growing in each year during the FY73 to FY80 period, most reentrants were in pay grades E03 or below.^a

Other Services by Year of Reentry

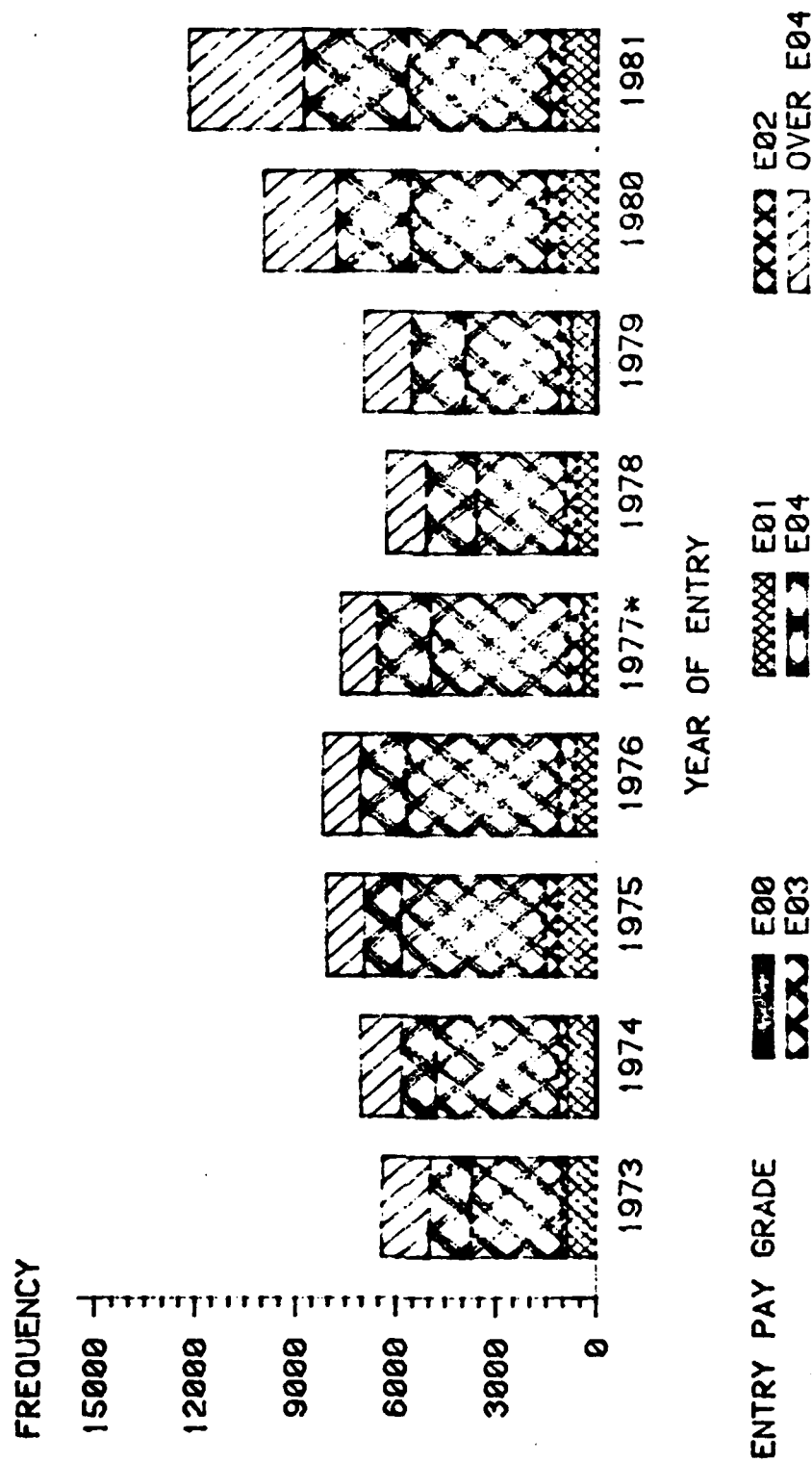
The Office of Naval Research (ONR) has indicated an interest in comparing the behavior of reentrants who had been in different branches of the service. In particular, some possible differences between Navy veterans (NAVETS) and veterans of other branches of the service (OSVETS) are considered here.

Before we note trend differences a data problem should be mentioned. DMDC cohort files contain data on the branch of prior service; however, these data are available only through March 1979. The data in Figure 4 and Table 4 clearly show that a data coding change took place after FY79. DMDC data currently include a designation of

^aThis trend is likely to change since in the Fall of 1982 Navy policy restricted the enlistment of prior-service personnel with pay grades below E04.

PRIOR SERVICE ACCESSIONS

Figure 3. Paygrades by Year of Entry



* For comparability FY1977 excluded the transition quarter July to September

TABLE 3

Number of Prior-Service Accessions By
Keentry Pay Grade and Year of Reentry

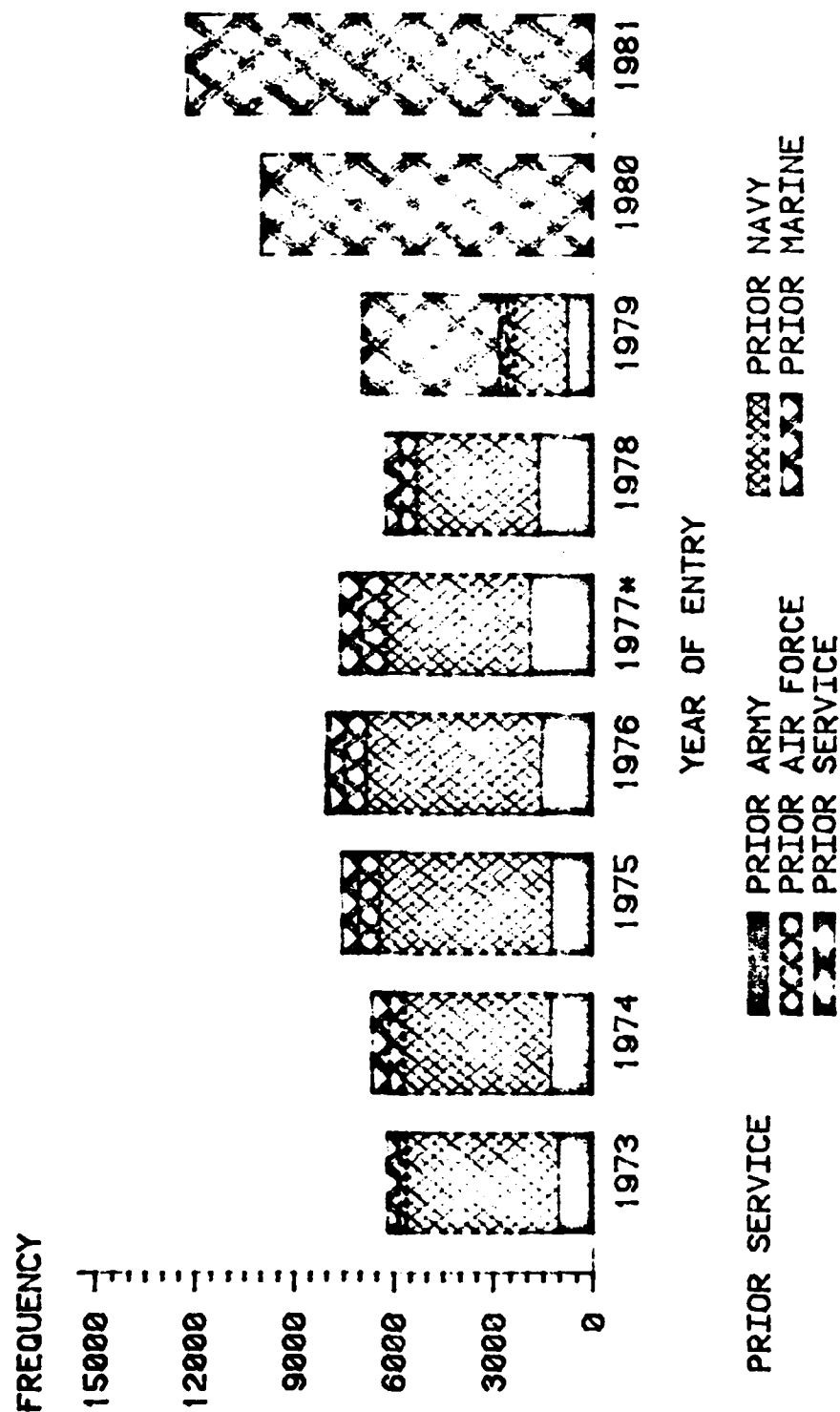
Pay Grade	FY73	FY74	FY75	FY76	FY77a*	FY77b*	FY78	FY79	FY80	FY81	TOTAL
E01	889 (13.9)	859 (12.2)	1150 (14.3)	627 (7.7)	394 (5.1)	138 (10.3)	582 (9.3)	762 (11.0)	1046 (10.5)	1010 (8.2)	7457 (10.1)
E02	126 (2.0)	268 (3.8)	360 (4.5)	497 (6.1)	459 (6.0)	71 (5.3)	359 (5.7)	335 (4.8)	497 (5.0)	420 (3.4)	3392 (4.6)
E03	2733 (42.8)	3663 (52.0)	4321 (53.6)	4542 (55.6)	4124 (53.8)	576 (43.1)	2665 (42.4)	2829 (40.7)	4054 (40.5)	4240 (34.6)	33747 (45.5)
E04	1237 (19.4)	1027 (14.6)	1110 (13.8)	1395 (17.1)	1582 (20.7)	320 (24.0)	1501 (23.9)	1596 (23.0)	2216 (22.2)	3132 (25.6)	15116 (20.4)
Over E04	1407 (22.0)	1228 (17.4)	1123 (13.9)	1105 (13.5)	1101 (14.4)	230 (17.2)	1171 (18.7)	1430 (20.6)	2185 (21.9)	3454 (28.2)	14434 (19.5)
Total											
Nonmissing	6392	7045	8064	8166	7660	1335	6278	6952	9998	12256	74146
Missing	0	17	0	1	1	0	0	12	4	0	35
TOTAL	6392	7062	8064	8167	7661	1335	6278	6964	10002	12256	74181

Notes: () The percentages are column percents of the nonmissing totals.

* FY77 is split into two periods: FY77a for July 1, 1976 to June 30, 1977 and FY77b for July to September 1977.

PRIOR SERVICE ACCESSIONS

Figure 4. Other Services by Year of Entry



* For comparability FY1977 excluded the transition quarter July to September

TABLE 4

Number of Prior-Service Accessions by Area
of Prior Service and Year of Reentry

Area of Prior Service	FY73	FY74	FY75	FY76	FY77a*	FY77b*	FY78	FY79 ¹	FY80 ¹	FY81 ¹	TOTAL
Prior- Army	1035 (16.8)	1255 (18.9)	1248 (16.6)	1535 (19.2)	1889 (24.8)	366 (27.6)	1660 (26.6)	778 [27.7]	0 (0)	0 (0)	9766 [21.1]
Prior- Navy	4576 (74.1)	4432 (66.6)	5172 (68.6)	5277 (65.9)	4369 (57.4)	777 (58.6)	3662 (58.7)	1579 [56.2]	0 (0)	0 (0)	29844 [64.5]
Prior- Air Force	226 (3.7)	443 (6.7)	625 (8.3)	654 (8.2)	739 (9.7)	90 (6.8)	499 (8.0)	208 [7.4]	0 (0)	0 (0)	3484 [7.5]
Prior- Marine	338 (5.5)	522 (7.8)	490 (6.5)	465 (5.8)	615 (8.1)	91 (6.9)	417 (6.7)	244 [8.7]	0 (0)	0 (0)	3182 [6.9]
Prior- Service - Area not Indicated	0 (0)	0 (0)	0 (0)	75 (0.9)	5 (0.1)	1 (0.1)	5 (0.1)	4147 (59.6)	10002 (100)	12256 (100)	26491 (36.4)
Total Nonmissing	6175	6652	7535	8006	7617	1325	6243	6956	10002	12256	72767
Missing	217	410	529	161	44	10	35	8	0	0	1414
TOTAL	6392	7062	8064	8167	7661	1335	6278	6964	10002	12256	74181

Notes: () Column percents of the nonmissing totals.

[] Column percents of reentrants for whom area of prior-service was indicated.

*FY77 is split into two periods: FY77a for July 1, 1976 to June 30, 1977 and FY77b for July to September 1977.

¹A revision of computer codes during 1979 prohibits tracing the prior service of veterans for a portion of 1979 and subsequent years.

prior-service enlistment, but no designation of the particular prior-service area. From evaluation and recruiting standpoints, such data would seem very important. We therefore strongly recommend that serious consideration be given to restoring the detailed prior-service code to the DMDC cohort files.

If one considers only those years in which detailed data are available (FY73 to FY79), some observations can be made on the changes in the proportions of NAVETS and OSVETS. The majority of prior-service enlistments for this period had been in the Navy. However, the relative annual proportion of all Navy prior-service reentrants fell from 74.1 percent in FY73 to 58.7 percent in FY78. Most of this 15.4 percentage point difference appears to have been made up by relatively more Army personnel's enlisting in the Navy.

In April, 1979 the DMDC coding of prior-service data was changed so that the specific military branch of prior service was no longer recorded. Therefore, these specific data were available for only 40.0 percent of the prior-service accessions in fiscal year 1979 and for none of the prior-service accessions after fiscal year 1979. Of the 2,808 accessions for whom these data were available for FY79, 27.7 percent had been in the Army. This percentage represents a continuation of the trend of an increasing proportion of Army OSVETS among prior-service accessions.^a

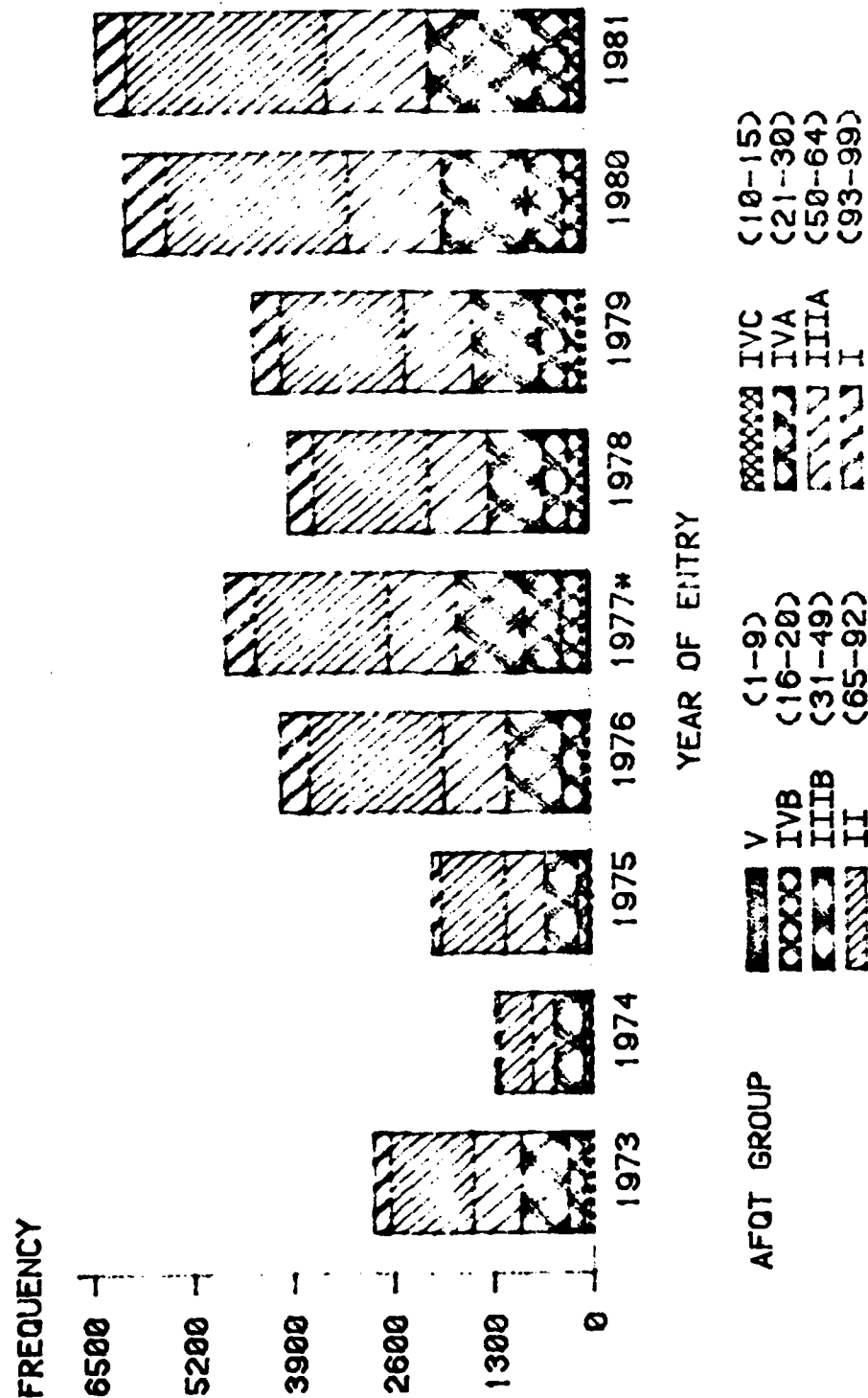
AFQT Groups by Year of Reentry

Armed Forces Aptitude Tests are administered at the time of entry into the armed service. Percentile scores have been standardized into the familiar AFQT subgroups shown in Figure 5 and Table 5--i.e.,

^aTechnical Report 83-2 raises serious doubts as to whether or not this trend is in the Navy's best interest.

PRIOR SERVICE ACCESSIONS

Figure 5. AFQT Groups by Year of Entry



* For comparability FY1977 excluded the transition quarter July to September

TABLE 5

Number of Prior-Service Accessions by
AFQT Group and Year of Reentry

AFQT Group	FY73	FY74	FY75	FY76	FY77a *	FY77b *	FY78	FY79	FY80	FY81	TOTAL
Worst											
V											
(1-9)	1 (0.0)	2 (0.2)	1 (0.0)	2 (0.0)	8 (0.2)	2 (0.2)	6 (0.2)	3 (0.1)	6 (0.1)	8 (0.1)	39 (0.1)
IV C											
(10-15)	54 (1.9)	7 (0.6)	15 (0.7)	22 (0.5)	74 (1.6)	15 (1.9)	54 (1.4)	77 (1.8)	59 (1.0)	51 (0.8)	428 (1.2)
IV B											
(16-20)	71 (2.5)	9 (0.7)	18 (0.9)	45 (1.1)	281 (5.9)	47 (5.8)	184 (4.7)	167 (3.9)	207 (3.5)	133 (2.1)	1162 (3.2)
IV A											
(21-30)	203 (7.1)	86 (6.8)	136 (6.6)	281 (7.0)	468 (9.9)	85 (10.5)	324 (8.3)	354 (8.2)	468 (7.8)	447 (7.0)	2852 (7.9)
III B											
(31-49)	613 (21.5)	383 (30.4)	425 (20.6)	721 (17.9)	886 (18.7)	158 (19.5)	721 (18.6)	865 (20.0)	1116 (18.6)	1377 (21.7)	7265 (20.0)
III A											
(50-64)	626 (21.9)	291 (23.1)	515 (24.9)	831 (20.7)	890 (18.8)	150 (18.5)	773 (19.9)	888 (20.5)	1223 (20.4)	1326 (20.9)	7513 (20.7)
II											
(65-92)	1078 (37.8)	430 (34.2)	841 (40.7)	1741 (43.3)	1734 (36.6)	299 (37.0)	1489 (38.3)	1607 (37.1)	2375 (39.6)	2613 (41.1)	14207 (39.1)
Best											
I											
(93-99)	209 (7.3)	51 (4.1)	117 (5.7)	379 (9.4)	391 (8.3)	53 (6.6)	332 (8.6)	366 (8.5)	544 (9.1)	403 (6.3)	2845 (7.8)
Total											
Nonmissing	2855	1259	2068	4022	4732	809	3883	4327	5998	6358	36311
Missing	3537	5803	5996	4145	2929	526	2395	2637	4004	5898	37870
TOTAL	6392	7062	8064	8167	7661	1335	6278	6964	10002	12256	74181

Notes: () The percentages are column percents of the nonmissing totals.

*FY77 is split into two periods: FY77a for July 1, 1976 to June 30, 1977 and FY77b for July to September 1977.

subgroup V is the worst, and I is the best. Two points should be noted about these reentries:

- A disturbing number, usually more than one-half of the AFQT scores, are missing from DMDC cohort files on prior-service enlisted personnel. The reasons for their absence are not clear, but are being sought. These missing scores make the other entries in Figure 5 and Table 5 somewhat questionable (unless one assumes that missing scores are distributed proportionately across groups).
- If one accepts the entries in Table 5, then it appears that prior-service reentries in the Navy may be considered relatively talented (60 percent of all Navy prior-service reentries have AFQT scores in the upper 50 percent). Whether this tendency is due more to self-selection or recruiter screening cannot be determined, however.

SOCIODEMOGRAPHIC DATA CONCERNING PRIOR-SERVICE PERSONNEL

Education by Year of Reentry.

Formal education is another qualitative indicator for prior-service Navy reentrants. Several points can be noted about the formal education of the reentrants described in this report. The entries in Figure 6 and Table 6 indicate that

- Eighty-seven percent of prior-service reentrants had 12 or more years of education.
- No clear and consistent changes appear over time between the proportion of reentrants in specific educational subgroups.
- College graduates comprise a very small proportion of prior-service Navy reentrants: among all prior-service reentrants there were nearly eight times as many high school dropouts as college graduates.^a

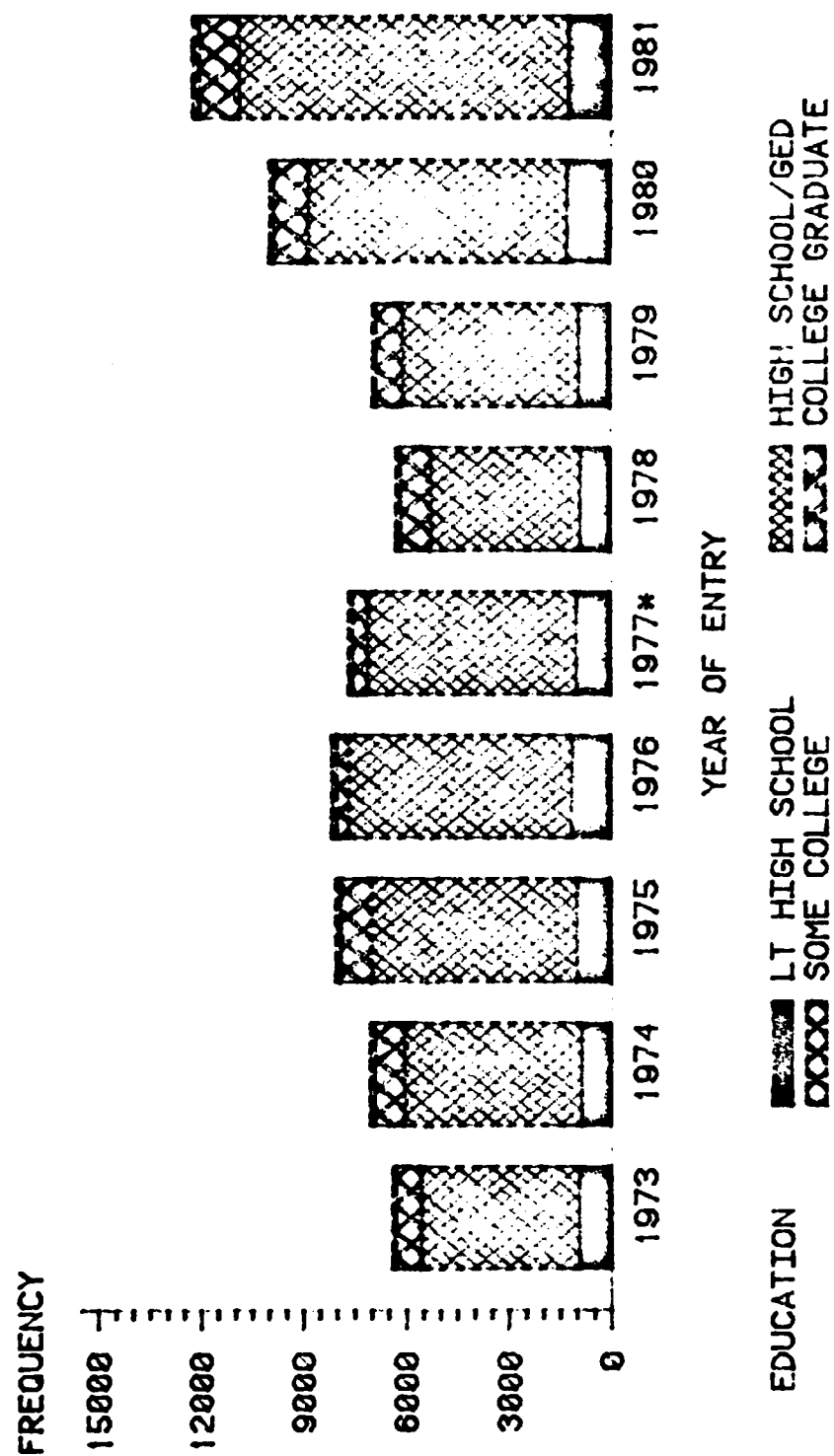
Marital Status by Year of Reentry

Figure 7 and Table 7 show the annual number of prior-service accessions by marital status. The percentage of single men grew from 30.7 percent in FY73 to 58.1 percent in 1981; while the complement

^aIf the Navy is to successfully make the transition to an increasingly technically oriented staff, then the proportion of high school dropouts to college graduates should probably be reversed.

PRIOR SERVICE ACCESSIONS

Figure 6. Levels of Education by Year of Entry



* For comparability FY1977 excluded the transition quarter July to September

TABLE 6

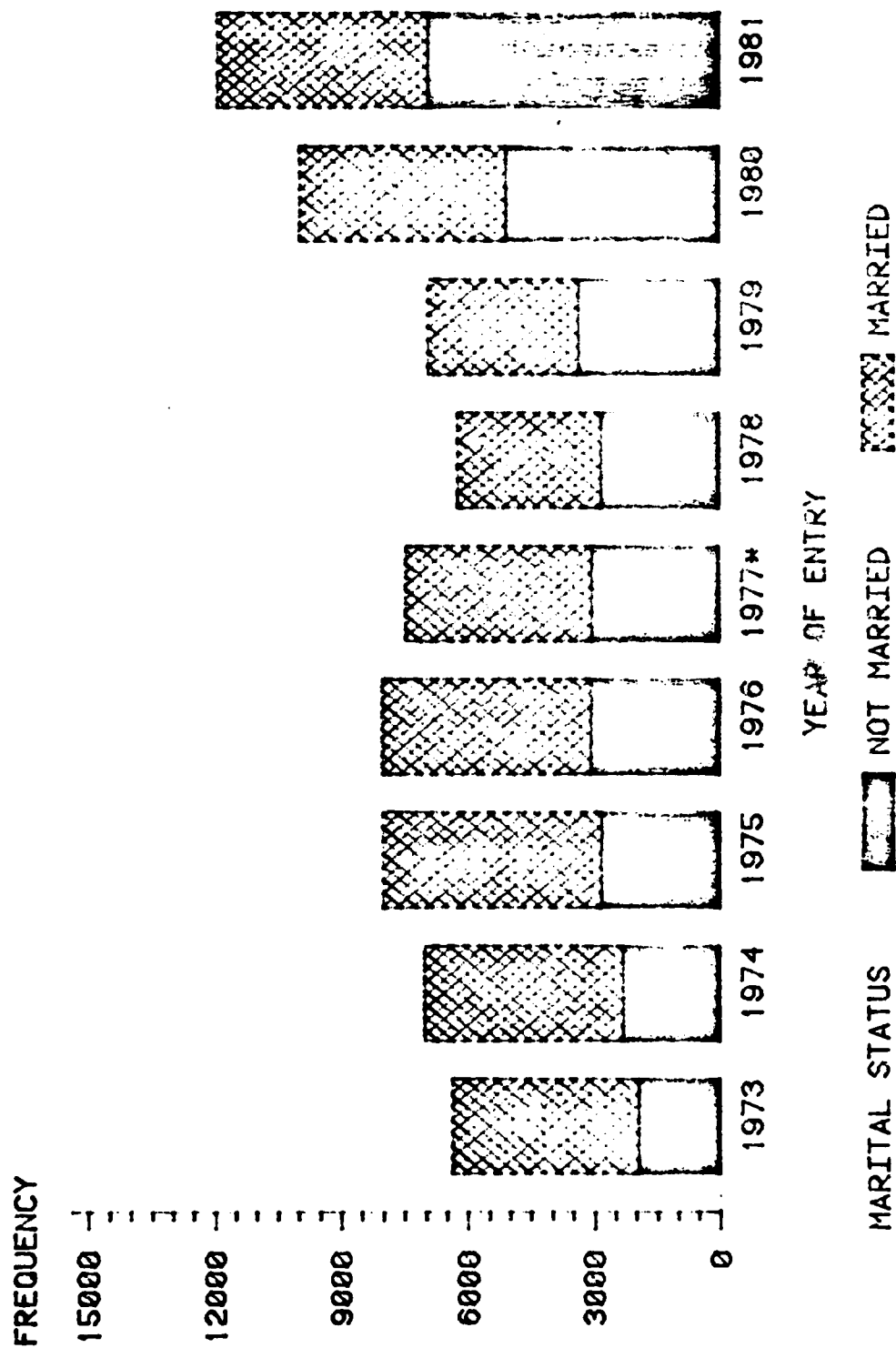
Number of Prior-Service Accessions
by Education and Year of Reentry

Education	FY73	FY74	FY75	FY76	FY77a*	FY77b*	FY78	FY79	FY80	FY81	TOTAL
Less than high school	966 (15.1)	903 (12.8)	1023 (12.7)	1172 (14.4)	1014 (13.2)	216 (16.2)	910 (14.5)	941 (13.5)	1298 (13.0)	1245 (10.2)	9688 (13.1)
High school or GED	4627 (72.4)	5159 (73.1)	5958 (73.9)	6505 (79.6)	6105 (79.7)	1025 (76.8)	4375 (69.7)	5150 (74.0)	7573 (75.7)	9647 (78.7)	56124 (75.7)
Some college	713 (11.2)	866 (12.3)	946 (11.7)	334 (4.1)	425 (5.5)	63 (4.7)	850 (13.5)	767 (11.0)	984 (9.8)	1153 (9.4)	7101 (9.6)
College graduate	86 (1.3)	134 (1.9)	137 (1.7)	156 (1.9)	117 (1.5)	31 (2.3)	143 (2.3)	102 (1.5)	147 (1.5)	211 (1.7)	1264 (1.7)
Total											
Nonmissing	6392	7062	8064	8167	7661	1335	6278	6960	10002	12256	74177
Missing	0	0	0	0	0	0	0	4	0	0	4
TOTAL	6392	7062	8064	8167	7661	1335	6278	6964	10002	12256	74181

Notes: () The percentages are column percents of the nonmissing totals.

*FY77 is split into two periods: FY77a for July 1, 1976 to June 30, 1977 and FY77b for July to September 1977.

PRIOR SERVICE ACCESSIONS
Figure 7. Marital Status by Year of Entry



* For comparability FY1977 excluded the transition quarter July to September

TABLE 7
Number of Prior-Service Accessions
by Marital Status and Year of Reentry

Marital Status	FY73	FY74	FY75	FY76	FY77a*	FY77b*	FY78	FY79	FY80	FY81	TOTAL
Single	1958 (30.7)	2330 (33.1)	2831 (35.4)	3080 (38.4)	3063 (41.1)	585 (43.9)	2836 (45.5)	3373 (48.7)	5097 (51.1)	6936 (58.1)	32089 (43.3)
Married	4415 (69.2)	4710 (66.9)	5176 (64.6)	4935 (61.6)	4395 (58.9)	747 (56.1)	3397 (54.5)	3559 (51.3)	4886 (48.9)	4997 (41.9)	41217 (55.6)
Total											
Nonmissing	6373	7040	8007	8015	7458	1332	6233	6932	9983	11933	73306
Missing	19	22	57	152	203	3	45	32	19	323	875
TOTAL	6392	7062	8064	8167	7661	1335	6278	6964	10002	12256	74181

Notes: () The percentages are column percents of the nonmissing totals.

*FY77 is split into two periods: FY77a for July 1, 1976 to June 30, 1977 and FY77b for July to September 1977.

group, married men, fell as a percent of the total. These changes are fairly dramatic and may have cost implications for the Navy and behavioral implications for prior-service reentrants.^a

Number of Dependents by Year of Reentry

The number of dependents and marital status are closely related. As the data in Figure 8 and Table 8 indicate, the increase in the proportion of prior-service reentrants with no dependents (other than self) rose from 24.2 percent in FY73 to 53.5 percent in FY81. This reflects, in part, an increase in the proportion of single recruits and, in part, fewer children for married couples. Like the marital status changes, fewer children may have cost and behavioral implications.

Ethnic Group by Year of Reentry

Most prior-service reentrants in the Navy are white-- an average of 82 percent in fiscal years 1973 to 1981. In FY73, 85.7 percent of all prior-service accessions were white vs. 80.1 percent in FY81. The decrease in the percentage of white reentrants has been offset by a nearly proportional growth in the percentage of black reentrants, especially in the period after FY75. These data, which are shown in Figure 9 and Table 9, lead to the following observation:

- The proportion of black prior-service accessions increased by 50 percent over the ten-year period up to FY81, but 4 out of 5 accessions were white.

Age by Year of Reentry

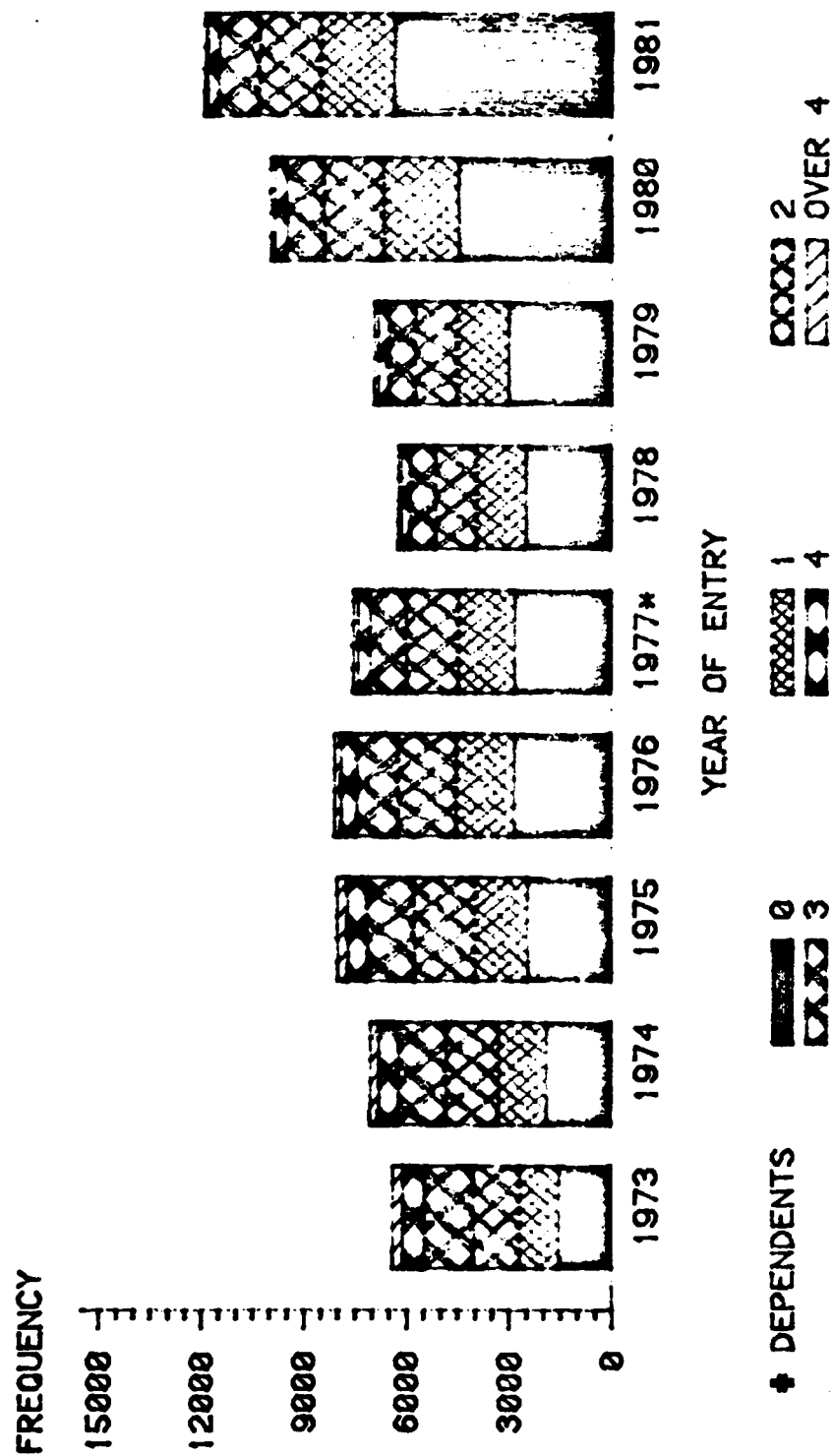
Entries in Figure 10 and Table 10 show age by year of reentry for prior-service accessions. Several points can be noted:

- The age group 21-30 years accounted for 4 out of 5 prior-service reentrants in the FY73 to FY81 period.
- The age group 21-30 accounted for 86.5 percent of all prior-service accessions in FY73 vs. 77.8 percent in FY81. A relative

^aLater reports will consider these issues.

PRIOR SERVICE ACCESSIONS

Figure 8. Number of Dependents by Year of Entry



* For comparability FY1977 excluded the transition quarter July to September

TABLE 8
Number of Prior-Service Accessions
by Number of Dependents and Year of Reentry**

Number of Dependents**	FY73	FY74	FY75	FY76	FY77a*	FY77b*	FY78	FY79	FY80	FY81	TOTAL
0	1544 (24.2)	1903 (27.0)	2446 (30.5)	2837 (35.1)	2834 (37.5)	520 (39.0)	2512 (40.3)	3020 (43.5)	4481 (44.9)	6382 (53.5)	28479 (38.7)
1	1152 (18.0)	1417 (20.1)	1538 (19.2)	1706 (21.1)	1645 (21.8)	312 (23.4)	1446 (23.2)	1501 (21.6)	2203 (22.1)	2144 (18.0)	15064 (20.5)
2	1328 (20.8)	1516 (21.5)	1771 (22.1)	1677 (20.7)	1515 (20.1)	271 (20.3)	1170 (18.8)	1205 (17.4)	1710 (17.1)	1801 (15.1)	13964 (19.0)
3	1440 (22.6)	1390 (19.7)	1381 (17.2)	1232 (15.2)	1054 (14.0)	157 (11.8)	751 (12.0)	793 (11.4)	1116 (11.2)	1290 (10.1)	10514 (14.3)
4	622 (9.7)	570 (8.1)	578 (7.2)	456 (5.6)	380 (5.0)	48 (3.6)	272 (4.4)	310 (4.5)	358 (3.6)	314 (2.6)	3908 (5.3)
Over 4	298 (4.7)	251 (3.6)	294 (3.7)	180 (2.2)	123 (1.6)	24 (1.8)	86 (1.4)	108 (1.6)	116 (1.2)	95 (0.8)	1575 (2.1)
Total Nonmissing	6384	7047	8008	8088	7551	1332	6237	6937	9984	11936	73504
Missing	8	15	56	79	110	3	41	27	18	320	677
TOTAL	6392	7062	8064	8167	7661	1335	6278	6964	10002	12256	74181

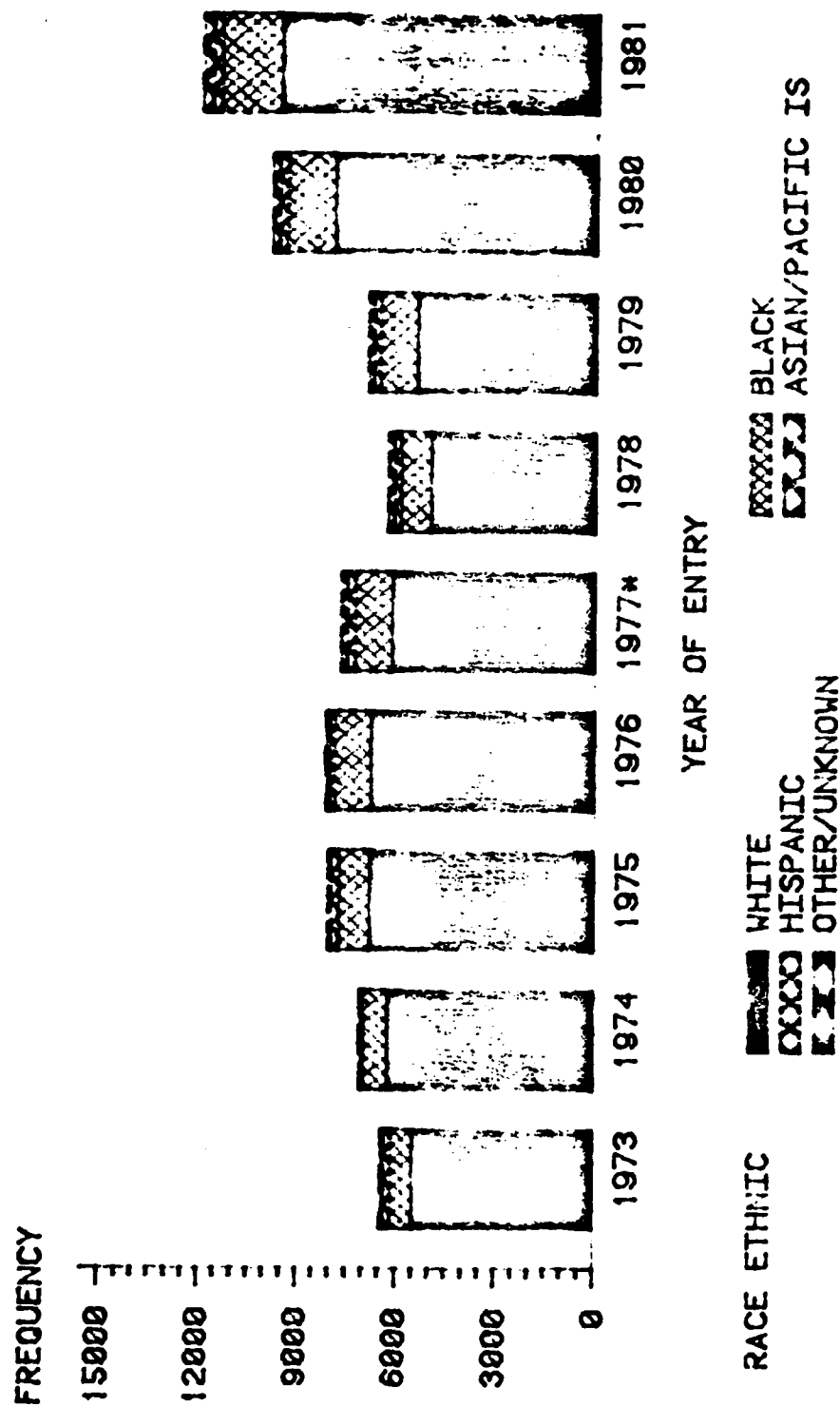
Notes: () The percentages are column percents of the nonmissing totals.

*FY77 is split into two periods: FY77a for July 1, 1976 to June 30, 1977 and FY77b for July to September 1977.

**Other than self.

PRIOR SERVICE ACCESSIONS

Figure 9. Ethnic Groups by Year of Entry



* For comparability FY1977 excluded the transition quarter July to September

TABLE 9
Number of Prior-Service Accessions
by Ethnic Group and Year of Reentry

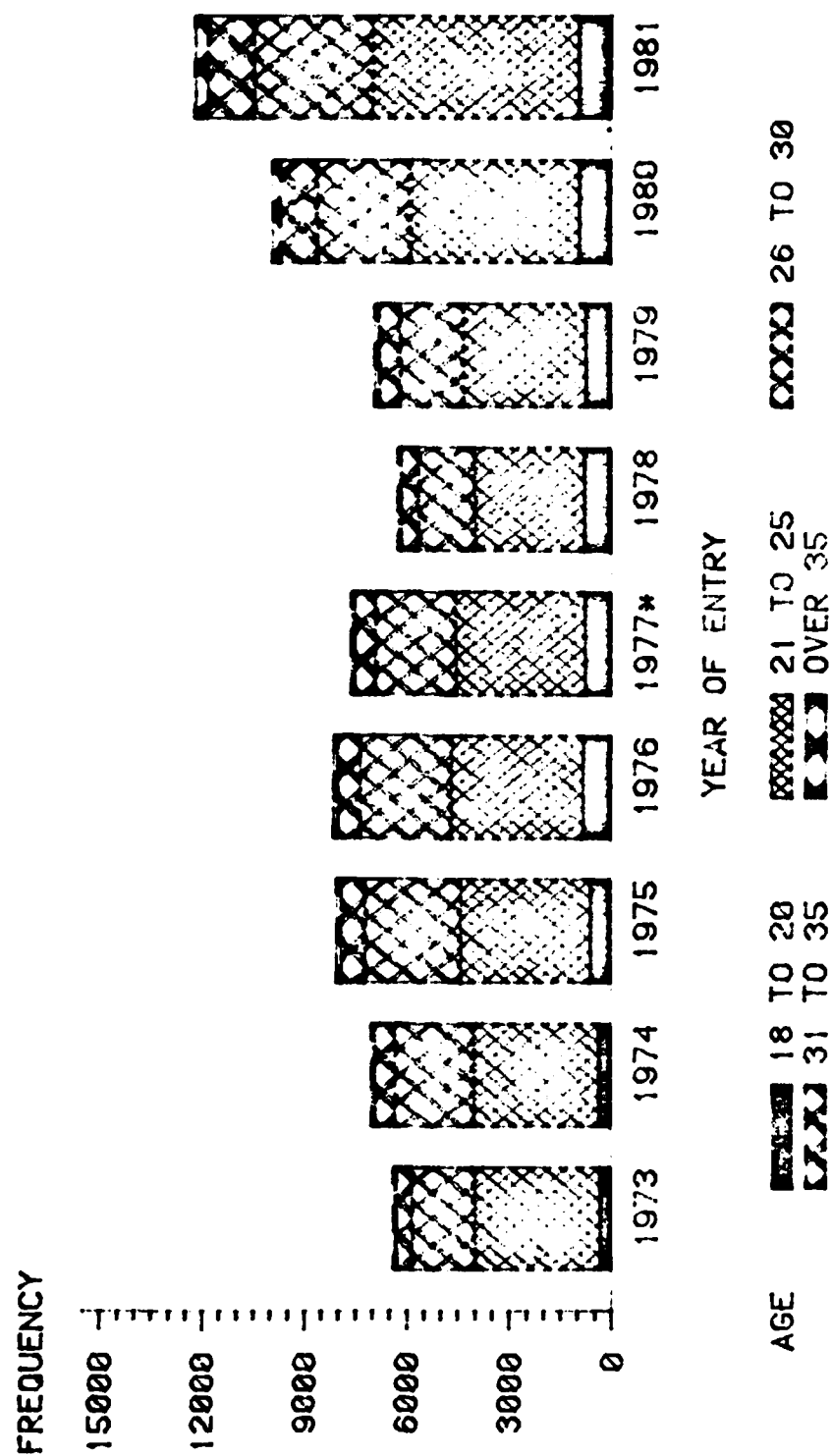
Ethnic Group	FY73	FY74	FY75	FY76	FY77a*	FY77b*	FY78	FY79	FY80	FY81	TOTAL
White	5478 (85.7)	6261 (88.7)	6794 (84.3)	6753 (83.3)	6144 (80.2)	1042 (78.1)	4997 (79.6)	5428 (78.6)	7935 (80.7)	9604 (80.1)	60436 (82.1)
Black	642 (10.0)	738 (10.5)	937 (11.6)	1112 (13.7)	1095 (14.3)	220 (16.5)	902 (14.4)	1094 (15.9)	1460 (14.8)	1804 (15.2)	10004 (13.6)
Hispanic	219 (3.4)	0 (0)	235 (2.9)	140 (1.7)	245 (3.2)	44 (3.3)	197 (3.1)	210 (3.0)	221 (2.3)	258 (2.2)	1769 (2.4)
Other/ unknown	53 (.8)	63 (0.9)	91 (1.1)	100 (1.2)	177 (2.3)	29 (2.2)	182 (2.9)	170 (2.5)	221 (2.3)	321 (2.7)	1407 (1.9)
Total											
Nonmissing	6392	7062	8057	8105	7661	1335	6278	6902	9837	11987	73616
Missing	0	0	7	62	0	0	0	62	165	269	565
TOTAL	6392	7062	8064	8167	7661	1335	6278	6964	10002	12256	74181

Notes: () The percentages are column percents of the nonmissing totals.

*FY77 is split into two periods: FY77a for July 1, 1976 to June 30, 1977 and FY77b for July to September 1977.

PRIOR SERVICE ACCESSIONS

Figure 10. Ages by Year of Entry



* For comparability FY1977 excluded the transition quarter July to September

TABLE 10

Number of Prior-Service Accessions
By Age and Year of Reentry

Age	FY73	FY74	FY75	FY76	FY77a*	FY77b*	FY78	FY79	FY80	FY81	TOTAL
18-20 years old	328 (5.1)	369 (5.2)	602 (7.5)	828 (10.2)	787 (10.3)	168 (12.7)	801 (12.8)	754 (10.9)	948 (9.5)	967 (7.9)	6552 (8.9)
21-25 years old	3668 (57.5)	3657 (52.0)	3801 (47.4)	3841 (47.3)	3761 (49.4)	753 (56.8)	3197 (51.2)	3554 (51.3)	4938 (49.7)	6019 (49.3)	37189 (50.4)
26-30 years old	1852 (29.0)	2310 (32.9)	2798 (34.9)	2648 (32.6)	2360 (31.0)	304 (22.9)	1642 (26.3)	1878 (27.1)	2701 (27.2)	3482 (28.5)	21975 (29.8)
31-35 years old	439 (6.9)	586 (8.3)	702 (8.8)	672 (8.3)	599 (7.9)	86 (6.5)	500 (8.0)	602 (8.7)	1099 (11.1)	1366 (11.2)	6651 (9.0)
35 years old and over	91 (1.4)	109 (1.6)	119 (1.5)	126 (1.6)	112 (1.5)	15 (1.1)	102 (1.6)	137 (2.0)	242 (2.4)	370 (3.0)	1423 (1.9)
Total Nonmissing	6378	7031	8022	8115	7619	1326	6242	6925	9928	12204	73790
Missing	14	31	42	52	42	9	36	39	74	52	391
TOTAL	6392	7062	8064	8167	7661	1335	6278	6964	10002	12256	74181

Notes: () The percentages are column percents of the nonmissing totals.

*FY77 is split into two periods: FY77a for July 1, 1976 to June 30, 1977 and FY77b for July to September 1977.

increase took place during this same time for age groups 31 years and older--8.3 percent in FY73 vs. 14.2 percent in FY81.^a

- The 20 and below age group accounts for 8.9 percent of all prior-service accessions.

Occupational Category by Year of Reentry

Table 11, Distribution of Prior-Service Accessions by DOD Occupational Category, describes the dispersion of prior-service personnel among the Department of Defense (DOD) occupational categories. Presumably, the distribution reflects both individual choices and Navy personnel policy.

Data presented in Table 11 do not necessarily reflect occupations held by a prior-service individual at the time of return to the Navy since the data were obtained from the most recent job code information available, rather than from reentry data. Therefore, these data may or may not reflect approximate training received after reentry, but they do describe occupational utilization.

The FY81 data, however, provide a better approximation of the reentry occupation since many of these people have not had time to receive formal training yet. As the data in Table 11 indicate, many of the FY81 accessions (3,771 or 30.8 percent) were in the non-occupational category. Of FY81 accessions 22.5 percent were in the category of

^aTo the extent that older prior-service recruits have more dependents and a higher likelihood of remaining in the Navy, they may be less cost efficient to recruit than 18 to 20 year old individuals.

^bTo be designated as a "prior-service" enlistee and still be under 21 years old is technically correct, but these facts imply that the first term of service was not completed.

TABLE 11
Number of Prior-Service Accessions (FY 1973-FY 1981)
by DOD Occupational Category and Year of Reentry

DOD Occupational Category (Sample Ratings)	FY73	FY74	FY75	FY76	FY77*	FY77B*	FY78	FY79	FY80	FY81	TOTAL
Gun Crews and Seamanship Specialists (BM, QM)	1526 (23.9)	1517 (21.5)	1434 (17.8)	1105 (13.5)	848 (11.1)	129 (9.7)	517 (8.2)	507 (7.3)	592 (5.9)	910 (7.4)	9085 (12.2)
Electronic Equipment Repairman (ET, AT, FT, DS, ST)	544 (8.5)	622 (8.8)	837 (10.4)	917 (11.2)	757 (9.9)	112 (8.4)	575 (9.2)	616 (8.8)	891 (8.9)	816 (6.7)	6687 (9.0)
Communications and Intelligence Specialists (KM, CT, IS)	524 (8.2)	620 (8.8)	808 (10.0)	829 (10.2)	749 (9.8)	154 (11.5)	642 (10.2)	783 (11.2)	1238 (12.4)	1235 (10.1)	7582 (10.2)
Medical and Dental Specialists (IM, DT)	410 (6.4)	395 (5.6)	390 (4.8)	222 (2.7)	202 (2.6)	44 (2.2)	367 (5.8)	475 (6.8)	551 (5.5)	559 (4.6)	1615 (4.9)
Other Technical and Allied Specialists (PH, AG, MU)	103 (1.6)	98 (1.4)	33 (0.4)	48 (0.6)	48 (0.6)	17 (1.3)	72 (1.1)	70 (1.0)	74 (0.7)	75 (0.6)	638 (0.9)
Functional Support and Administration (PN, YN, SK)	688 (10.8)	634 (9.0)	695 (8.6)	569 (7.0)	643 (8.4)	106 (7.9)	585 (9.3)	640 (9.2)	780 (7.8)	829 (6.8)	6169 (8.3)
Electrical/Mechanical Equipment Repairmen (BT, MY, AD)	1565 (24.5)	1855 (26.3)	2157 (26.7)	2129 (26.2)	2094 (27.3)	349 (26.1)	1760 (28.0)	1942 (27.9)	2692 (26.9)	2760 (22.5)	19303 (26.0)
Craftsmen (HT, MK, BU)	644 (10.1)	763 (10.8)	749 (9.3)	495 (6.1)	403 (5.3)	77 (5.8)	341 (5.4)	370 (5.3)	534 (5.3)	529 (4.3)	4905 (6.6)
Service and Supply Handlers (MS, SH)	326 (5.1)	418 (5.9)	426 (5.3)	475 (5.8)	397 (5.2)	89 (6.7)	339 (5.4)	374 (5.4)	747 (7.5)	772 (6.3)	4363 (5.9)
Non-Occupational (SR, SA, SN, FR, FA, FN)	62 (1.0)	140 (2.0)	535 (6.6)	1378 (16.9)	1520 (19.8)	258 (19.3)	1080 (17.2)	1187 (17.0)	1903 (19.0)	3771 (30.8)	11834 (16.0)
TOTAL	6392 (8.6)	7062 (9.5)	8064 (10.9)	8167 (11.0)	7661 (10.3)	1335 (1.8)	6278 (8.5)	6964 (9.4)	10002 (13.5)	12256 (16.5)	74181 (100.00)

() Percent of cohort accessions in each occupational category.

[] Percent of total accessions in each year's cohort.

* FY1977 is split into two periods: 1977a for July 1, 1976 to June 30, 1977 and 1977b for July 1, 1977 to September 30, 1977.

electrical/mechanical equipment repairmen, and 10.1 percent were in the category of communications and intelligence experts. Less than 10 percent of FY81 accessions were in each of the following categories: gun crews and seamanship specialists, functional support and administration, electronic equipment repairmen, service and supply handlers, medical and dental specialists, craftsmen, and other technical and allied specialists.

Thirty-one percent of the FY81 prior-service accessions were listed in the non-occupational category -- primarily because they have not yet had the opportunity to achieve an occupational job code. If these people receive some training and enter another occupational category, their occupational code will change to reflect this later training. Yet the proportion is disturbing since a presumed goal of prior-service recruiting is to save money on training costs. With the passage of time, training is received and the proportion of non-occupational personnel declines. This probably accounts for the noticeable difference between the FY81 data (30.8 percent in the non-occupational category) and data for the other years (1.0 percent in FY73 to 19.0 percent in FY80).

If the FY81 data are excluded, the data more closely describe occupational utilization. Since all other reentrants would have been in the Navy for at least one year, they would have had time to receive some retraining and enter a different occupational category. Such retraining may be reflected in the FY73 to FY80 data which refer to the reentrants' most recent occupational category. Still, the percentage of reentrants who appear to have returned to positions in the non-occupational category seems high, especially for fiscal years 1976 to 1980. During these years the percentage of accessions still in the non-occupational category

ranged from 16.9 to 19.8. These percentages were noticeably higher than the corresponding percentages for the earlier fiscal years 1973, 1974, and 1975. In these earlier three years, the percentage of accessions in the non-occupational category was 1.0, 2.0 and 6.6. The difference between the earlier three years (FY73-FY75) and the later years cannot be fully attributed to the reentrants' not having had the opportunity to achieve an occupational code. Further research is needed to identify alternative explanations for this difference.

The possibility of differences between personnel in the non-occupational and the occupational categories was investigated further. This investigation resulted in the following observations.

Compared with personnel in all occupational categories, individuals in the non-occupational category

- were much less likely to have reentered in pay grades E-4 and E-5. Most people in the non-occupational category reentered in the E-3 pay grade.
- had lower AFQT scores and less education.
- were less likely to be white, and less likely to be 21-25 years old.
- were more likely to be single, have fewer dependents, or be 18 to 20 years old.
- after 1976 were more likely to have entered with a waiver.

Data on non-occupational personnel were also explored for differences associated with the area of prior service.^a Among the non-occupational personnel there were proportionately

- fewer NAVETS than OSVETS. (This was especially true for fiscal years 1976 to 1979).

^aArea of prior service (i.e. NAVET or OSVET) was not specified after March, 1979, so these comparisons are limited to fiscal years 1973 to 1979.

- more OSVETS in pay grades E-1 than E-2, more NAVETS in E-2 than E-1.
- more NAVETS than OSVETS who had not completed high school.
- fewer whites among NAVETS than OSVETS.
- fewer 18-20 year olds among NAVETS, more 21-25 year olds among OSVETS.

CONCLUSION AND FUTURE RESEARCH IMPLICATIONS

This report has organized and presented data for all U.S. Navy enlisted men who reentered the Navy in the 1973 to 1981 period. Overall trends for military and sociodemographic factors are described in detail. The primary objective is to describe informally the universe of such individuals. The next step is to consider the reasons for the emergence of various trends and patterns -- for example, the extent to which overall trends in accessions may reflect deliberate prior-service recruiting efforts, or the reasons for so many prior-service personnel being listed without an occupational code. These are the type of issues to be addressed next in an overall research effort aimed at enhancing Navy manpower policy.

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OTHER TECHNICAL REPORTS OF THIS PROJECT^a

As part of the project titled "An Empirical Study to Enhance the Reenlistment Process of Civilian Personnel with Prior Military Service"^b the following technical reports have been completed.

Stephenson, S. P., Beik, L. L., Ellison, D. R., & Fitch, S. D. Profile of prior-service accessions to the U.S. Navy: Fiscal Years 1973-1981 (Tech. Rep. ONR 83-1). University Park, PA: The Pennsylvania State University, Institute for Policy Research and Evaluation, April 1983.

Ellison, D. R., Mitchell, M. E., Beik, L. L., Stephenson, S. P., & Fitch, S. D. Separation of prior-service Navy personnel over two- and six-year periods: Fiscal years 1973-1981 (Tech. Rep. ONR 83-2). University Park, PA: The Pennsylvania State University, Institute for Policy Research and Evaluation, April 1983.

Beik, L. L., Mitchell, M. E., & Fitch, S. D. Segmentation of prior-service reenetrants in the U.S. Navy: A preliminary analysis (Tech. Rep. ONR 83-3). University Park, PA: The Pennsylvania State University, Institute for Policy Research and Evaluation, April 1983.

Other reports will be completed during the course of the project.

^aAdditional copies of these reports can be obtained for a nominal charge. Requests for copies should be sent to:

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Code 2627
Washington, DC 20375

Psychologist
Office of Naval Research Detachment
1030 East Green Street
Pasadena, CA 91106

Special Assistant for Projects
Office of the Assistant Secretary of
the Navy (Manpower and Reserve Affairs)
5D800, The Pentagon
Washington, DC 20350

Resources Planner
Long Range Planning Group (Op-00X)
Office of the Chief of Naval Operations
2000 North Beauregard Street
Alexandria, VA 22311

Head, Manpower, Personnel, Training
and Reserve Team
Office of the CNO (Op-964D)
4A578, The Pentagon
Washington, DC 20350

Assistant for Personnel Logistics Planning
Office of the CNO (Op-987H)
5D772, The Pentagon
Washington, DC 20350

Head, Long Range Manpower, Personnel,
and Training Planning Branch
Office of the DCNO(MPT) (Op-110)
Department of the Navy
Washington, DC 20350

Head, Economics Analysis Section
Office of the DCNO(MPT) (Op-110C2)
Department of the Navy
Washington, DC 20350

Head, Research, Development and
Studies Branch
Office of the DCNO(MPT) (Op-115)
Department of the Navy
Washington, DC 20350

Assistant for Human Factors
Engineering R&D
Office of the DCNO(MPT) (Op-115E)
Department of the Navy
Washington, DC 20350

Head, Workforce Information Section
Office of the DCNO(MPT) (Op-140F)
Department of the Navy
Washington, DC 20350

Head, Family Support Program Branch
Office of the DCNO(MPT) (Op-152)
Department of the Navy
Washington, DC 20350

Headquarters U.S. Marine Corps
Code MPI-20
Washington, DC 20380

Program Manager for Manpower,
Personnel, and Training
Naval Material Command/Office of
Naval Technology (Code 0722)
Arlington, VA 22217

Director, Decision Support Systems Div.
Naval Military Personnel Command (N-164)
Department of the Navy
Washington, DC 20370

Director, Distribution Department
Naval Military Personnel Command (N-4)
Department of the Navy
Washington, DC 20370

Assistant for Evaluation, Analysis, and MIS
Naval Military Personnel Command (N-6C)
Department of the Navy
Washington, DC 20370

Director, Overseas Duty Support Program
Naval Military Personnel Command (N-62)
Department of the Navy
Washington, DC 20370

Head, HRM Operations Branch
Naval Military Personnel Command (N-62F)
Department of the Navy
Washington, DC 20370

Director, Recreational Services Division
Naval Military Personnel Command (N-65)
1300 Wilson Boulevard, Room 998
Arlington, VA 22209

Director, Research and Analysis Division
Navy Recruiting Command (Code 22)
4015 Wilson Boulevard
Arlington, VA 22203

Naval School of Health Sciences
National Naval Medical Center (Bldg. 141)
Washington, DC 20814
Attn: LCDR J. M. LaRocco

Commanding Officer
Navy Personnel R&D Center
San Diego, CA 92152

Technical Director
NPRDC
San Diego, CA 92152

Deputy Technical Director
NPRDC
San Diego, CA 92152

Director of Planning and Appraisal
NPRDC (Code 03)
San Diego, CA 92152

Program Director, Management Systems
NPRDC (Code 11)
San Diego, CA 92152

Program Director, Personnel and
Occupational Measurement
NPRDC (Code 12)
San Diego, CA 92152

Program Director, Instructional Tech.
NPRDC (Code 13)
San Diego, CA 92152

Program Director, Training Systems
NPRDC (Code 14)
San Diego, CA 92152

Program Director, Career Development
and Retention
NPRDC (Code 15)
San Diego, CA 92152

Program Director, Motivation and
Productivity
NPRDC (Code 16)
San Diego, CA 92152

Program Director, Command and
Support Systems
NPRDC (Code 17)
San Diego, CA 92152

Department of Administrative Sciences
Naval Postgraduate School (Code 54Ea)
Monterey, CA 93940

Department of Operations Research
Naval Postgraduate School (Code 55Mt)
Monterey, CA 93940

Technical Director
Navy Health Research Center
P. O. Box 85122
San Diego, CA 92138

Principal Civilian Advisor on
Education and Training
Naval Education and Training Command
NAS Pensacola, FL 32508

Assistant Chief of Staff for Research,
Development, Test, and Evaluation
Naval Education and Training Command (N-5)
NAS Pensacola, FL 32508

Special Assistant for Research, Experi-
mental Programs, and Academic Programs
Naval Technical Training Command (Code 016)
NAS Memphis (75)
Millington, TN 38054

Program Director
Manpower Research and Advisory Services
Smithsonian Institution
801 North Pitt Street
Alexandria, VA 22314

Military Assistant for Training and
Personnel Technology
Office of the Under Secretary of
Defense for Research and Engineering
3D129, The Pentagon
Washington, DC 20301

Personnel Analysis Division
AF/MPXA
5C360, The Pentagon
Washington, DC 20330

Technical Director
U.S. Army Research Institute for the
Behavioral and Social Sciences
5001 Eisenhower Avenue
Alexandria, VA 22333

Dr. Stanley Horowitz
Director, Manpower Support and
Readiness Program
Center for Naval Analyses
2000 North Beauregard Street
Alexandria, VA 22311

Dr. Robert F. Lockman
Scientific Advisor to the DCNO(MPT)
Manpower Support and Readiness Program
Center for Naval Analyses
2000 North Beauregard Street
Alexandria, VA 22311

Dr. Bernard D. Rostker
Director, Navy Management Program
Center for Naval Analyses
2000 N. Beauregard Street
Alexandria, VA 22311

Dr. Irwin Sarason
Department of Psychology, NI-25
University of Washington
Seattle, WA 98195

Dr. Michael Borus
Center for Human Resource Research
The Ohio State University
5701 North High Street
Worthington, OH 43085

Dr. Richard C. Morey
Graduate School of Business Administration
Duke University
Durham, NC 27706

Mr. Francis E. O'Connor
Information Spectrum, Inc.
1745 South Jefferson Davis Highway
Arlington, VA 22202

Dr. Eric Flamholtz
Graduate School of Management
UCLA
Los Angeles, CA 90024

Dr. David G. Bowers
Institute for Social Research
University of Michigan
P. O. Box 1248
Ann Arbor, MI 48106

Dr. William Bowman
Potomac Institute for Economic Research
4232 Hawthorne Street, NW
Washington, DC 20016

Dr. Lorand Szalay
Institute for Comparative Social and
Cultural Studies, Inc.
4330 East-West Highway, Suite 900
Washington, DC 20014

Dr. Allen Newell
Department of Computer Science
Carnegie-Mellon University
Schenley Park
Pittsburgh, PA 15213

Dr. Brian K. Waters
Human Resources Research Organization
300 North Washington Street
Alexandria, VA 22314

Dr. Harry C. Triandis
Department of Psychology
University of Illinois
603 East Daniel
Champaign, IL 61829

Dr. Lee Roy Beach
Department of Psychology (NI-25)
University of Washington
Seattle, WA 98195

Dr. Eric Fredland
Department of Economics
U.S. Naval Academy
Annapolis, MD 21402

Officer in Charge
Human Resource Management Detachment
NAS Alameda, CA 94501

Director, Human Resource Management
Training Department
Naval Amphibious School
NAB Coronado, CA 92155

Commanding Officer
Human Resource Management Center
Naval Training Center Building 304
San Diego, CA 92133

Officer in Charge
Human Resource Management Detachment
Naval Submarine Base New London
P. O. Box 81
Groton, CT 06340

Officer in Charge
Human Resource Management Detachment
NAS Mayport, FL 32228

Director, Human Resource Management
Department
Naval Aviation Schools Command
NAS Pensacola, FL 32508

Commanding Officer
Human Resource Management Center
Pearl Harbor, HI 96860

CINCPACFLT
Human Resource Management Division
Code 71
Pearl Harbor, HI 96860

Officer in Charge
Human Resource Management Detachment
Naval Base
Charleston, SC 29408

Commanding Officer
Human Resource Management School
NAS Memphis (96)
Millington, TN 38054

Commanding Officer
Human Resource Management Center
1300 Wilson Boulevard, CWB Rm 1148
Arlington, VA 22209

Commanding Officer
Human Resource Management Center
5621-23 Tidewater Drive
Norfolk, VA 23509

Commander in Chief, U.S. Atlantic Fleet
Human Resource Management Division
Code 15
Norfolk, VA 23511

Director, Human Resource Training
Department
Naval Amphibious School
NAB Little Creek
Norfolk, VA 23521

Officer in Charge
Human Resource Management Detachment
NAS Whidbey Island
Oak Harbor, WA 98278

Officer in Charge
Human Resource Management Detachment
U.S. Naval Station Rota, Box 41
FPO New York 09540

Officer in Charge
Human Resource Management Detachment
Box 3
FPO New York 09521

Commanding Officer
Human Resource Management Center London
Box 23
FPO New York 09510

Commander in Chief U.S. Naval Force
Europe
Human Resource Management Division
FPO New York 09510

Officer in Charge
Human Resource Management Detachment
Subic
Box 60
San Francisco, CA 96651

Officer in Charge
Human Resource Management Detachment
Yokosuka
P. O. Box 4
Seattle, WA 98762

Dr. Edward Aiken
Navy Personnel R&D Center
San Diego, CA 92152

Dr. James Lester
Office of Naval Research Detachment
Boston
495 Summer Street
Boston, MA 02210

Dr. H. Wallace Sinaiko
Manpower Research and Advisory
Services
Smithsonian Institution
801 N. Pitt Street
Alexandria, VA 22314

Dr. Frank Landy
Department of Psychology
450 Moore Building, PSU
University Park, PA 16802

Dr. Alan Lau
Organizational Effectiveness
Research Group
Office of Naval Research
800 N. Quincy Street
Arlington, VA 22217

Professor George Thomas
Department of Administrative
Justice (Code 54TE)
Naval Post Graduate School
Monterey, CA 93940

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